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ABSTRACT

The one-page abstract summarizes "Research on the Effectiveness of Early Childhood Education," an ERIC Computer Search Reprint containing bibliographic information and abstracts of 64 studies of early intervention. The citations are discussed in five categories: research overviews, methodological studies, policies and large-scale programs, evaluations of specific programs and intervention techniques, and parent training. The research overviews indicate that early intervention has significant immediate benefits which may be sustained for many years. Methodological studies describe new methods, evaluate older methods of collecting and analyzing data, and identify methodological issues (such as ethical concerns prohibiting a "no treatment" group). Examples of reports concerning policies and large scale programs include summaries and analyses of federal, state, and city programs as well as statements of private organizations. Evaluation studies of specific programs and intervention techniques have generally found programs to be effective in terms of improved skills, low levels of subsequent special education placement, and positive parent assessments. Although some studies claim little support for the importance of parental involvement in early intervention, most programs evaluated suggest the value of parent training. (DB)

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RESEARCH & RESOURCES ON SPECIAL EDUCATION

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ABSTRACT XII
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THE EFFECTIVENESS OF EARLY CHILDHOOD SPECIAL EDUCATION

Many special educators see early education as a way to prevent or ameliorate educational disabilities associated with handicapping conditions and reduce the need for later special services. To assess the effectiveness of early special education, researchers are engaged in the process of identifying and investigating the student, family, environmental, and program characteristics that contribute to its success. However, although many studies have been conducted, few are widely and unequivocally accepted. Research on the effects of early education is relatively new and is plagued by controversy over findings and the methodological problems associated with measuring a phenomenon as complex as the educational growth of young, handicapped children.

Research on the Effectiveness of Early Childhood Education is an ERIC Computer Search Reprint containing bibliographic information and abstracts on 64 studies of early intervention. These documents are summarized here in five categories: research overviews, methodological studies, policies and large-scale programs, evaluations of specific programs and intervention techniques, and parent training.

RESEARCH OVERVIEWS

This category includes meta-analyses, literature reviews, and evaluations of effectiveness based on multiple programs. Many of the studies identify the characteristics of effective preschool programs, and some assess the cost-effectiveness of early intervention programs.

These studies indicate that early intervention has significant immediate benefits, and that in many cases, these benefits are sustained for many years.[1] Many studies have found that longer, more intense, or more highly structured programs are more effective.[2] Other variables traditionally considered to increase the success of early intervention programs are parent involvement, the child's age at the start of intervention, number of children per adult or class size, and the training or licensing of the intervenor.[3] However, recent studies have challenged the effects of some of these variables, and their findings, in turn, have been challenged.

For example, one meta-analysis found evidence to corroborate findings that more structured programs and certified intervenors tend to increase effectiveness, but found only limited evidence to support the ideas that younger age at start and parental involvement contribute significantly to effectiveness.[4] The study recommended further research to assess the extent to which these variables are associated with intervention effectiveness, and at least some following studies have supported the effectiveness of the variables. However, the controversy served to focus attention on the factors that influence the success of early education and the methods by which its effectiveness is assessed.

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METHODOLOGICAL STUDIES

These studies describe new methods and evaluate older methods of collecting and analyzing data on early intervention. They address issues associated with generalizability of findings, essential controls, threats to interval validity, political and ethical concerns, and the weight of evidence required to assert intervention effectiveness.

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A number of methodological issues in early intervention research remain to be solved. For example, a major ethical and political concern is the need to make treatment available to all children, which prohibits traditional designs that use a "no treatment" control group. In response to this issue, alternative research designs have been explored. For example, the theoretical control group method has a panel of child development experts predict the child's development without intervention,[5] and these predictions are then compared to the child's development with intervention. It should be noted that some researchers feel that such studies should be corroborated by studies using other methods. A third means of avoiding the "no treatment" control group is to adapt medical research designs, such as those that compare subjects receiving different treatments.

Other designs and analytic techniques described in this group of documents include meta-analysis and methodologies for cost-effectiveness research, longitudinal studies, and evaluating consumer judgments of program effectiveness. Important variables are identified, and new indices of effectiveness, such as behavior engagement (time spent in appropriate environmental interaction) are explored.

POLICIES AND LARGE-SCALE PROGRAMS

This category includes summaries and analyses of large-scale federal, state, and city programs as well as statements of issues, needs, and policies of private organizations. For example, the category includes Annual Reports to Congress that describe the major special education programs and initiatives of the U.S. Department of Education. The 1984 Report notes that children aged 3–5 represented nearly one-quarter of the increase in children who received special education services, and 38 states mandated services to at least some portion of the preschool handicapped population. The impact of federal initiatives such as the Handicapped Children's Early Education Program (HCEEP) is described in this report.[6]

At the city level, the category includes reports from the Dallas Independent School District on seven of its programs, including a longitudinal evaluation of its program for handicapped infants.[7]

An additional example of documents in this category is a policy statement from the National Center for Clinical Infant Programs, which encourages the establishment of a basic floor of integrated services built on the base of federal, state, and private programs that currently exists. The Center has identified 14 needs that should be addressed, including appropriate, accessible prenatal care for all pregnant women, day care for infants and toddlers, and identification of learning disabled children before they enter school.[8]

EVALUATIONS OF SPECIFIC PROGRAMS AND INTERVENTION TECHNIQUES

This category includes evaluations of the effectiveness of specific programs and intervention techniques. Some of these programs provide training to parents and teachers of handicapped children as well as to the children themselves, and some provide financial or cost-effectiveness data.

In general, these evaluations have found the programs studied to be effective as measured in terms of improved skills, low levels of subsequent placement in special education or retention in grade, and positive parent assessments of the program's effect on their child.[9] The studies provide some evidence to corroborate findings that indicate that the length of the preschool program may be a predictor of later school success, and that age at entry into the preschool program may also be related to treatment outcome.[10]

Among the specific intervention techniques described in these documents are infant stimulation for children with Down's syndrome,[11] a fine motor curriculum to shape the sensorimotor skills of profoundly retarded children,[12] and techniques for increasing the contingent responsiveness of teachers and aides.[13]

PARENT TRAINING

Studies in this category evaluated the effects of various programs that train parents to provide specific intervention programs to their handicapped children. Some studies have claimed that the research literature provides little support for the idea that parental involvement is critical to early intervention. However, the programs evaluated in these documents are reported to improve children's problematic behavior,[14] increase parental acceptance and responsiveness to special needs children and the children's responsiveness to their families,[15] and for developmentally delayed infants, improve fine motor skills.[16]

Research on the Effectiveness of Early Childhood Education is one of a number of ERIC Computer Search Reprints, extensive bibliographies on specific topics in special education produced by the ERIC Clearinghouse on Handicapped and Gifted Children. Each reprint describes 60 to 100 documents and includes an abstract summarizing each document. The documents are selected from searches of the ERIC (Educational Resources Information Center) and ECER (Exceptional Child Education Resources) data bases, which include over 500,000 journal articles and other documents concerning education.

This summary was derived from the document abstracts listed in *Research on the Effectiveness of Early Childhood Education* and should not be considered exhaustive of the literature on early childhood education. *Research on the Effectiveness of Early Childhood Education* is available for $11.75 ($10.00 to CEC members) from The Council for Exceptional Children, 1920 Association Drive, Dept. CS87 M, Reston, VA 22091–1589 (703/620-3660). Order Computer Search Reprint No. 522.

In the footnotes below and in the ERIC Search Reprint, ED numbers refer to ERIC documents, which are generally available from the ERIC system. EJ numbers refer to ERIC-indexed journal articles; the journal articles themselves can be obtained from the publisher or through a library. EC numbers refer to documents abstracted and indexed in the ECER data base; these documents can be obtained from the publisher (if the document is commercially published material) or University Microfilms International (if the document is a doctoral dissertation).

Footnotes

1. For example, see Karl White and Glendon Casto, "An Integrative Review of Early Intervention Efficacy Studies with At-Risk Children: Implications for the Handicapped," (1985), *Analysis and Intervention in Developmental Disabilities,* v. 5, n. 1, pp. 7-31 (ECER No. EC 181 136); and Melvin G. Moore et al., "The Long Range Effects of Early Childhood Education on a Trainable Mentally Retarded Population," (Dec., 1981), *Journal of the Division for Early Childhood,* v. 4, pp. 94-110 (ECER No. EC 141 461).

2. Utah State University, *Early Intervention Research Institute: Final Report, 1982-83 Work Scope,* (1983). (ECER No. EC 170 879; ERIC No. ED 250 845).

3. For example, see Glendon Casto and Margo A. Mastropieri, "The Efficacy of Early Intervention Programs, a Meta-Analysis," *Exceptional Children,* (Feb., 1986), v. 52, n. 5, pp. 417-424. (ECER No. EC 181 825).

4. Glendon Casto and Margo A. Mastropieri, "The Efficacy of Early Intervention Programs, a Meta-Analysis," *Exceptional Children,* (Feb., 1986), v. 52, n. 5, pp. 417-424. (ECER No. EC 181 825).

5. Margaret E. Mullen, *Research Strategies for the Longitudinal Evaluation of Handicapped Infants,* (1981). (ERIC No. ED 218 876).

6. U.S. Department of Education. *Annual Evaluation Report: Fiscal Year 1984.* (ERIC No. ED 256 081). *Annual Evaluation Report: Fiscal Year 1983.* (ERIC No. ED 240 747). *Annual Evaluation Report: Fiscal Year 1982.* (ERIC No. ED 225 305).

7. Dallas Independent School District, *In Retrospect: 1980-1981: Special Education Research and Evaluation.* (ERIC No. ED 221 966).

8. Eleanor Szanton et al., *Infants Can't Wait,* (1986), and *Infants Can't Wait: The Numbers,* (1986). (ERIC Numbers unavailable).

9. For example, see Rita S. Weiss, "INREAL Intervention for Language Handicapped and Bilingual Children," *Journal of the Division for Early Childhood,* (Dec., 1981), v. 4, pp. 40-51 (ECER No. EC 141 457); Merle B. Karnes et al., "Impact of Early Programming for the Handicapped: A Follow-up Study into the Elementary School," *Journal of the Division of Early Childhood,* (Dec., 1981), v. 4, pp. 62-79, (ECER No. EC 141 459); and Susan Koen at al., "The Long-Range Effects of the Regional Demonstration Program for Preschool Handicapped Children," *Journal of the Division of Early Childhood,* (Dec., 1982), v. 6, pp. 73-83 (ECER No. EC 160 653).

10. See, for example, Edward C. Fenski et al., "Age at Intervention and Treatment Outcome for Autistic Children in a Comprehensive Intervention Program," *Analysis and Intervention in Developmental Disabilities,* (1985), v. 5, n. 1-2, pp. 49-58 (ECER No. EC 181 138); and Kathryn LeLaurin, "The Experimental Analysis of the Effects of Early Intervention with Normal, At-Risk, and Handicapped Children Under Three," *Analysis and Intervention in Developmental Disabilities,* (1985), v. 5, n. 1-2, pp. 129-150 (ECER No. EC 181 143).

11. Teresa Sharav and Leah Shlomo, "Stimulation of Infants with Down Syndrome: Long Term Effects," *Mental Retardation,* (Apr., 1986), v. 24, n. 2, pp. 81-86. (ECER No. EC 182 481).

12. Doris Rosen-Morris and E. George Stikei, "Strategies for Teaching Severely/Profoundly Handicapped Infants and Young Children," *Journal of the Division of Early Childhood,* (Dec., 1981), v. 4, pp. 81-93. (ECER No. EC 141 460).

13. Stephen B. Cannon, *The Effects of Training on Teachers' Verbal Contingent Responsiveness to Preschool Handicapped Children,* (1984). (ERIC No. ED 245 491; ECER No. EC 162 851).

14. Howard N. Sloane and George T. Endo, *Using Self-Instructional Materials to Train Parents of Young Handicapped Children in Solving Behavior Problems, Final Report,* (Nov., 1982). Utah State University, Salt Lake City, Educational Psychology Department (ECER No. EC 151 195).

15. Glenn Affleck et al., "Relationship Focused Early Intervention in Developmental Disabilities," *Exceptional Children,* (Nov., 1982), v. 49, n. 3, pp. 259-261. (ECER No. EC 151 118).

16. Michael J. Paciorek, *The Effects of a Home-Based Parent Intervention Motor Development Program on Developmentally Delayed Children,* (Sept. 1983). Paper presented at the Fourth International Symposium on Adapted Physical Activity, London, England. (ERIC No. ED 242 708).

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